

1. (original): A functionalized, encapsulated fluorescent nanocrystal comprising:
a liposome;
one or more fluorescent nanocrystals encapsulated by the liposome; and
surface groups wherein an outer surface of the liposome comprises the surface
groups, and wherein the surface groups are selected from the group consisting of
one or more reactive functionalities, one or more affinity molecules, and a
combination thereof.
- 2.-11. Withdrawn
12. (original) The functionalized, encapsulated fluorescent nanocrystal according to claim 1,
wherein the surface groups comprise an affinity molecule comprising a monoclonal antibody.
13. (original) The functionalized, encapsulated fluorescent nanocrystal according to claim 1,
wherein the surface groups comprise a reactive functionality coupled to an affinity molecule
comprising a monoclonal antibody.
14. (original) The functionalized, encapsulated fluorescent nanocrystal according to claim 1,
wherein the surface groups comprise an affinity molecule comprising a nucleobase.
15. (original) The functionalized, encapsulated fluorescent nanocrystal according to claim 1,
wherein the surface groups comprise a reactive functionality coupled to an affinity molecule
comprising a nucleobase.
16. (original) The functionalized, encapsulated fluorescent nanocrystal according to claim 1,
wherein the surface groups comprise an affinity molecule comprising a nucleic acid molecule.
17. (original) The functionalized, encapsulated fluorescent nanocrystal according to claim 1,
wherein the surface groups comprise a reactive functionality coupled to an affinity molecule
comprising a nucleic acid molecule.
18. (original) The functionalized, encapsulated fluorescent nanocrystal according to claim 1,
wherein the liposome is comprised of one or more cationic lipids and one or more helper lipids
in forming a liposome adapted for transfection.

19.-38. withdrawn